

COMMON BLOCK NAME: OPSCHM

### Purpose

Contains information concerning all of the operations necessary to run OPT3 (input card B2) as well as information about the best run (pattern search) or trial (adaptive random search). Statistical information is also included.

### Listing

COMMON/OPSCHM/ISCHEM, IOPTIM, EXPO, NPER, MAXN, KC, KSTOP, PCENTO, MCP, AREA, IPUNCH, NNBEST, OPTIM, PBIAS, RCOF, IDETAL, DRMS, VRMS, SABSDF, SABS LG, RMOD1, HMLE, TLAMDA

### Size

23 words

### Variable Descriptions

<u>Variable</u>	<u>Type</u>	<u>Dimension</u>	<u>Word Position</u>	<u>Description</u>
ISCHEM	I*4	1	1	Optimization scheme to be used
IOPTIM	I*4	1	2	Optimization criterion: 1 = daily RMS error 2 = monthly volume RMS error 3 = $ S - O ^{** EXPO}$ 4 = $ \log S - \log O ^{** EXPO}$
EXPO	I*4	1	3	Exponent to be used with optimization criterion option 3 or 4 (default = 2)
NPER	I*4	1	4	Type of parameter increment to be used: 0 = fixed quantity 1 = percentage
MAXN	I*4	1	5	Maximum number of runs allowed before optimization is terminated
KC	I*4	1	6	Maximum number of resolutions allowed
KSTOP	I*4	1	7	Number of trials in which the criterion value must change by the specified percentage or optimization is terminated
PCENTO	I*4	1	8	Percentage (decimal equiv.) by which criterion value must change in specified number of trials
MCP	I*4	1	9	Option to display MCP output for run with best optimization criterion 0 = no run 1 = run
AREA	R*4	1	10	Drainage area of basin for which optimization criterion is being computed (sq. km.)
IPUNCH	I*4	1	11	Option to punch operations table with parameters from run with best optimization criterion 0 = no punch 1 = punch
NNBEST	I*4	1	12	The number of the optimization run at which the best criterion value was obtained. Must be less than MAXN.
OPTIM	R*4	1	13	Value of optimization criterion computed in OPSTAT. Improvement of this value is attempted in the optimization subroutines.
PBIAS	R*4	1	14	The percent bias of the simulated from the observed

<u>Variable</u>	<u>Type</u>	<u>Dimension</u>	<u>Word Position</u>	<u>Description</u>
RCOF	R*4	1	15	Coefficient of correlation of observed values to simulated values
IDETAL	R*4	1	16	Switch to determine whether revised evaporation, unit graph ordinates, and KSS and KG values are to be printed 0 = values not printed 1 = values printed
DRMS	R*4	1	17	Daily RMS Error
VRMS	R*4	1	18	Monthly Volume RMS Error
SABSDF	R*4	1	19	Sum of differences to a power $  S - O  ^{** EXPO}$
SABSLG	R*4	1	20	Sum of log differences to a power $  \log S - \log O  ^{** EXPO}$
RMOD1	R*4	1	21	Modified Correlation coefficient
HMLE	R*4	1	22	Heteroscedastic Maximum Likelihood Estimator
TLAMDA	R*4	1	23	Transformation parameter for HMLE